

***Spinolyprops pakistanicus* sp. n. (Coleoptera: Tenebrionidae),
an Oriental element in the fauna of northern Pakistan**

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***Spinolyprops pakistanicus* sp. n. (Coleoptera: Tenebrionidae), an Oriental element in the fauna of northern Pakistan.** – *Spinolyprops pakistanicus* sp. n. from Hazara and Swat in northern Pakistan is described, having a sexually dimorphic tibia, a structure yet unknown among the other congeners. In the fauna of northern Pakistan, generally containing mainly Palaearctic elements, the genus *Spinolyprops* is a further example with distinct Oriental distributional pattern.

Key-words: Coleoptera - Tenebrionidae - *Spinolyprops* - New species - Pakistan - Zoogeography.

INTRODUCTION

The genus *Spinolyprops* Pic. 1917 was based on an African species and was later recorded also from the Oriental region (KULZER 1954, KASZAB 1965). The genus contains five uniform species which can be separated easily by the specific shape of the aedeagus. A further species is added here originating from Hazara and Swat in northern Pakistan. *Spinolyprops pakistanicus* sp. n. is remarkable for its geographical origin (Fig. 6) and its sexually dimorphic tibia, a feature yet unknown in this genus.

MATERIAL

HNHM Hungarian Natural History Museum Budapest

MHNG Muséum d'Histoire Naturelle Genève

SMNS Staatliches Museum für Naturkunde in Stuttgart

THE ORIENTAL SPECIES OF *Spinolyprops*

***Spinolyprops himalayicus* Kaszab, 1965**

Material: India, Uttar Pradesh, Mussorie, 1300 m, 10.VII.1989 leg. A. Riedel, 1 ex. SMNS. Nepal, Gorkha Distr., Arughat Bazar, 600 m, 26.VII.1983 leg. J. Martens & W. Schawaller, 1 ex. SMNS. Thailand, Changwat Chiang Mai, Doi Pui, 1500 m, 19.XII.1988 leg. K. Geigenmüller & J. Trautner, 1 ex. SMNS. Thailand, Amphoe Chiang Dao, Doi Chiang Dao,

* Contribution to Tenebrionidae, no. 15. For no. 14 see: *Acta Zoologica Academiae Scientiarum Hungaricae* 41: 327-334, 1995.

Manuscript accepted 14.11.1995.

1700 m, 9.I.1989 leg. K. Geigenmüller & J. Trautner, 1 ex. SMNS. Thailand, Soppong, 19.29 N/98.18 E. 750 m, 13.V.1993 leg. L. Bocák, 1 ex. SMNS. Vietnam, Prov. Daklak, Buon Ma Thuot, Dak Linn, 500 m, 28.–29.IV.1986 leg. S. Golovatch & L. Medvedev, 7 ex. SMNS.

Distribution: Northern India, Nepal, Thailand, Vietnam, West-Bengal: Peshok (type locality).

Spinolyprops lateralis Pic, 1917

Material: Not seen.

Remarks: This taxon was described as a variety of the African *S. rufithorax* Pic, 1917. It seems doubtful that the African and Sumatran populations are conspecific. New material from Sumatra was unknown to KASZAB (1965) and to the present author (collections HNHM, MHNG, SMNS). It can not be excluded, that the following species *maculatus* from Sri Lanka and southern Burma is conspecific.

Distribution: Sumatra.

Spinolyprops maculatus Kulzer, 1954

Material: Sri Lanka, Uva, Diyaluma Falls, 400 m, 23.I.1970 leg. C. Besuchet, I. Löbl & R. Mussard, 3 ex. MHNG, 1 ex. SMNS. Sri Lanka, Kandy, at light, 18.III.1973 leg. G. Zimmermann, 1 ex. SMNS.

Distribution: Sri Lanka (type locality) (KULZER 1954), S Burma: Tenasserim (KASZAB 1965).

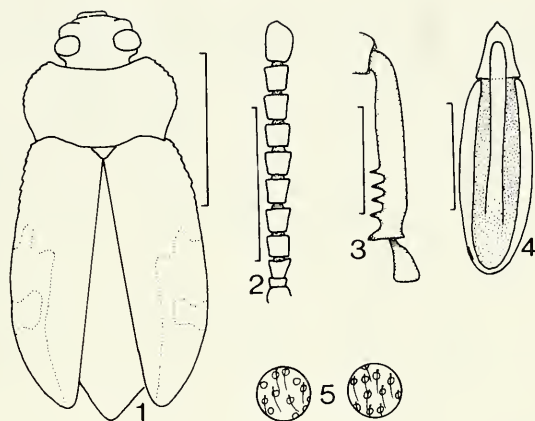
Spinolyprops pakisticus sp. n.

(Figs 1–5)

Holotype (♂): Pakistan, Hazara, Malkandi, 1500 m, 3.VI.1983 leg. C. Besuchet & I. Löbl, MHNG.

Paratypes: Same data as holotype, 4 ex. MHNG, 2 ex. SMNS; Hazara, Kaghan Valley, Malkandi, 1400 m, 19.–20.IV.1984 leg. S. Vit, 1 ex. MHNG; Hazara, Shogran, 2400 m, 3.VI.1983 leg. C. Besuchet & I. Löbl, 1 ex. MHNG; Swat, Madyan, 1400 m, 16.V.1983 leg. C. Besuchet & I. Löbl, 3 ex. MHNG, 1 ex. SMNS.

Description: Body length 4.5–5.0 mm. Head with about 25 coarse punctures irregularly distributed on the vertex between the eyes. Clypeus separated from the vertex by a distinct transverse impression between the antennal insertions. Proportions of the antennal segments as in Fig. 2. Eyes with large facets, the eye diameter consists of about 6 facets. Shape of the pronotum as usual in the genus with acute posterior corners (Fig. 1), lateral margin serrate in the anterior half. Pronotum coarsely punctured, punctures sparser distributed on the disc but without distinct unpunctured fields. Setae on pronotum about 3–4 times as long as diameter of the punctures (Fig. 5). Elytra including epipleura with about the same punctation as on the lateral sides of the pronotum, setae about 3–4 times as long as diameter of the punctures (Fig. 5). Lateral margin serrate in the anterior third. Each elytron with 2 confluent light spots on the posterior half, pattern as in Fig. 1. Metasternum laterally with coarse punctures like those on the elytra, medially without punctation. Punctures on the abdominal sternites half the diameter of the elytral punctures, last sternite not with coarser punctures. Legs with striking sexual dimorphism: mesotibia in males on the inner side with about 5 distinct spines (Fig. 3), unarmed in females. Wings present. Aedeagus as in Figs 4–5.



FIGS 1-5

Spinolypros pakistanicus sp. n. holotype ♂. – 1: Dorsal view, scale 2 mm; 2: Antenna, scale 1 mm; 3: right mesotibia, scale 0.5 mm; 4: Aedeagus, scale 0.5 mm; 5: Punctuation and setation on medial part of pronotum (left) and on disc of elytra (right).

Remarks: *Spinolypros pakistanicus* sp. n. is the first known species of the genus having sexual dimorphic legs. The other species show no differences in tibial morphology between males and females. In addition, the aedeagus has a specific shape, in particular the shape of the fused parameres with an acute tip (see parameres of the other Oriental species in Fig. 6). Apart from these distinct characters, the punctuation and setation on pronotum and elytra is specific but difficult to use without having the other species at hand. The dorsal punctuation is finer and similar to that in *maculatus*, but coarser in *himalayicus* and in particular in *trautneri*. The dorsal setation is similar to that in *maculatus* and *himalayicus*, but distinctly shorter in *trautneri*. The body shape and proportions and the colour pattern of the elytra are of less taxonomic value.

Distribution: Pakistan (Hazara, Swat).

Spinolypros trautneri Schawaller, 1994

Material: Philippines, Leyte, Lake Danao, 500 m, 19.II.–18.III.1991 leg. K. Geigenmüller, W. Schawaller & J. Trautner, holotype ♂ SMNS.

Distribution: Known only from the Philippine Island Leyte (SCHAWALLER 1994).

ZOOGEOGRAPHY

The mountain ranges of the Himalayas lodge an extremely species-rich fauna, not only of Coleoptera. A first simple reason for this 'megadiversity' is the position of the Himalayas at the junction of 2 faunal regions, the Oriental region in the south and the Palaearctic region in the north. Taxa penetrate from both regions into the Himalayas thus increasing species numbers. Furthermore, a number of taxa reaches the Himalayas from the mountains of the deep meridional upstreams of the rivers Irawady, Salween, Mekong, Yangtse and Yalung (Himalayan subregion sensu MARTENS 1979), being itself a mixture of Palaearctic and Oriental elements with many relic endemites. Additionally, the high vertical zonation with different climatical belts allows a coexistence of many closely related immigrants and the diverse isolations by deep valleys and high mountain ranges promotes the evolution of new species swarms from single ancient immigrants in particular of those with reduced migration possibilities.

In general, the faunal diversity in the Himalayas increases from west to the east. It is known for a long time that the very western parts in northern Pakistan and Kashmir generally have a quite poorer (concerning species number) fauna than the eastern Himalayas in Nepal, Sikkim, Darjeeling and the nearly unexplored northeastern Assam. The fauna in the western Himalayas is hitherto considered to be closely related to the faunas in the Middle Asian mountains (Pamir, Tien-Shan) and to the Afghanistan fauna, thus containing mainly Palaearctic elements. The abundant occurrence of the tenebrionid genera *Platynoscelis* (sensu lato), *Prosodes* or of the silphid genus *Aclypea* may be mentioned here as examples for palaearctic taxa on the genus level, lacking in the central and eastern Himalayas.

However, already LÖBL (1986) recognized a number of taxa from the Coleoptera families Pselaphidae and Scaphidiidae (subfamilies of Staphylinidae sensu LAWRENCE & NEWTON 1995) in northern Pakistan at least in Hazara and Swat having an Oriental origin. The family Discolomatidae, restricted to tropical habitats, also occurs in Hazara and Swat (SCHAWALLER 1989). The tenebrionid genus *Spinolypros* seems to be a further example for this distinct Oriental distributional pattern. Its species are recorded (apart from eastern Africa) from southeastern continental Asia, the Philippines, Sri Lanka and Sumatra (Fig. 6). In Nepal, *himalayicus* is known only from low altitudes below 1000 m with subtropical vegetation. Thus the occurrence of *Spinolypros pakistanicus* sp. n. in Hazara and Swat but not in Chitral up to 2400 m is remarkable. Obviously, some taxa with a generally Oriental origin can penetrate also in the very western Himalayas through the valleys of the river Indus and its tributaries. This holds true in particular for mobile taxa like *Spinolypros* (with functional hind wings).

It is not clear up to now if the occurrence of species in eastern Africa and southeastern Asia including the Philippines point to an ancient Gondwana origin before the separation of the continental plates or if the single African species has been introduced secondarily from tropical Asia.

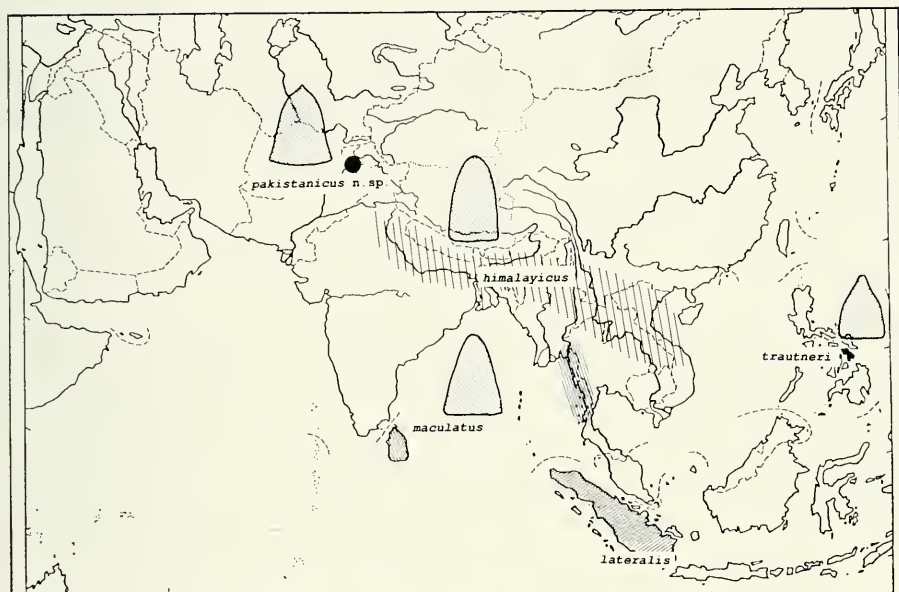


FIG. 6

Distribution of the Oriental species of *Spinolyprops* and shape of the parameres (aedeagus of *lateralis* unknown).

ACKNOWLEDGMENTS

For the loan of material I thank Dr Ivan Löbl (Genève) and Dr Otto Merkl (Budapest).

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